***

# EXHIBIT 19

**From:** Lopez, Alejandra@Waterboards [mailto:Alejandra.Lopez@Waterboards.ca.gov]
**Sent:** Wednesday, March 27, 2019 10:35 AM
**To:** Jim Waldron <jimwaldron79@gmail.com>
**Cc:** Harvey, Dale@Waterboards <Dale.Harvey@waterboards.ca.gov>; Holcomb, Ronald@Waterboards <Ronald.Holcomb@waterboards.ca.gov>
**Subject:** RE: Well naming

Good morning,

Yes, the Belridge well numbers are Starrh irrigation wells that have been renamed by Aera when those wells were sampled.

Belridge 6 = WW-1 = Starrh 9M No. 1
Belridge 7 = WW-2 = Starrh 9K No. 2
Belridge 1 = WW-3
Belridge 3 = WW-6

Thank you

Alejandra Lopez
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Oil Fields, Produced Wastewater Ponds
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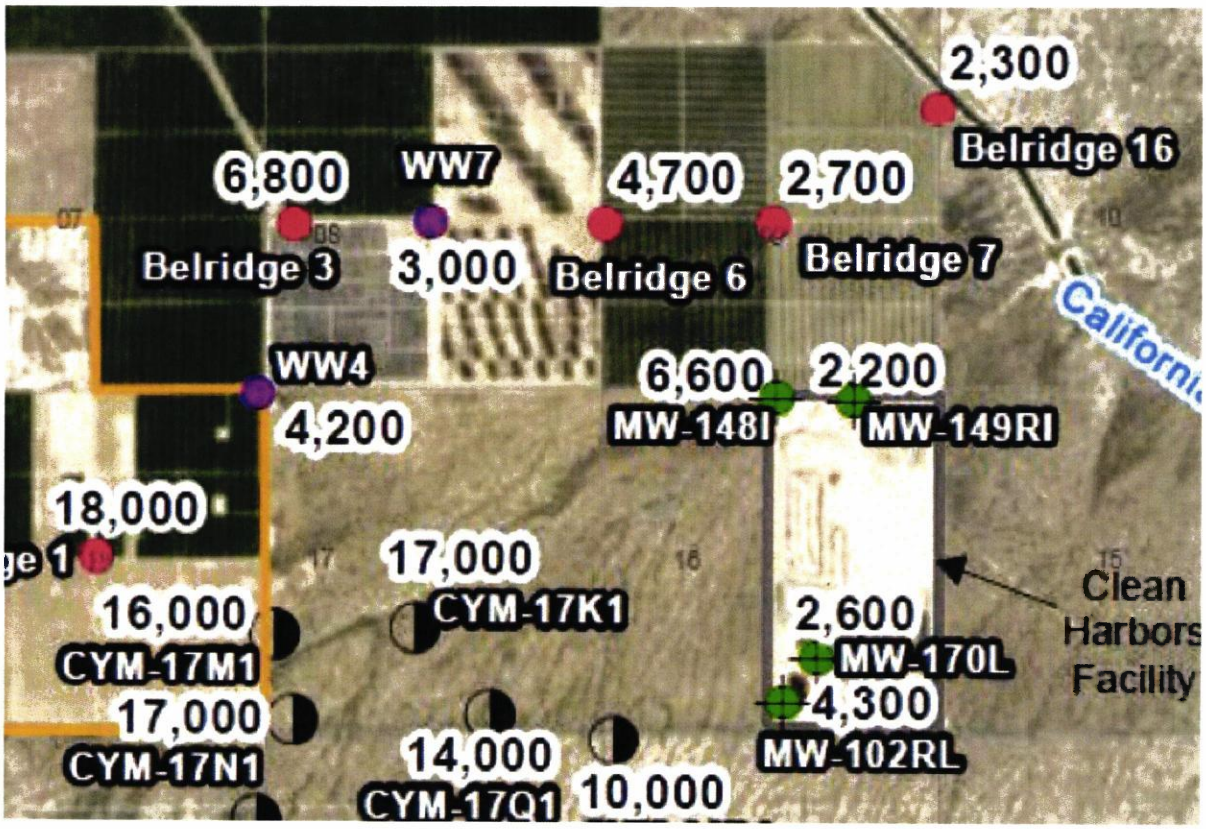
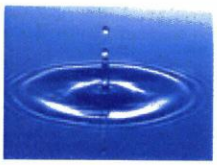
Office: (559) 445-6071
Fax: (559) 445-5910

**From:** Jim Waldron <jimwaldron79@gmail.com>
**Sent:** Wednesday, March 27, 2019 10:22 AM
**To:** Lopez, Alejandra@Waterboards <Alejandra.Lopez@Waterboards.ca.gov>
**Subject:** Well naming

Hi Alejandra. Could you tell me where you got the well names for the Belridge wells? Do those Belridge wells coincide with the wells owned by Fred Starrh?
Thanks so much.

Jim



**Jim Waldron** / Sole Proprietor
jimwaldron79@gmail.com / 661-332-8915

**SC Hydrogeology**


R-1


R-2

R-12

R-14


R-5


R-6

R-17

## The Irrigated Areas North of Clean Harbors

The Starrh and Starrh Cotton Growers (SSCG) irrigate over 6,000 acres directly north of Clean Harbors and the McKittrick Ponds Facility, and east of the Belridge Oil Field (Figure 1). In 2003 and 2004, water wells including WW-2, WW-1, WW-6, and WW-7 were installed and sampled on the SSCG irrigated areas (Aera, 2005).

Aerial photographs for the area (from Google Earth, see Attachment 1) indicate that, since 1994, crops have been grown in the section just north of Clean Harbors (T29S R22E Section 9) as well as in the two sections to the west of Section 9. Surface water supplied from the California Aqueduct enters the SSCG system near water well WW-6 (see Figure 1). Surface water was used for irrigation of SSCG lands before 2003. In 2003, wells WW-1, WW-2, and others were added to the water supply for irrigation; this is the first known use of groundwater in this area. Water wells WW-1 and WW-2 were observed to still be in use for irrigation in 2017 and 2018.

Attachment 2 provides historical aerial photographs for the northwest corner of the Clean Harbors Facility. The photographs show the crops grown just north of Clean Harbors as well as the condition of a pond adjacent to and just east of three Clean Harbors monitoring wells: MW-143U, MW-148I, and MW-PRL. The photographs indicate that the pond appears to be unlined and receives sufficient water to support some vegetative growth. The pond may also contribute seepage to the subsurface.

**Groundwater Quality**. Figure 1 shows recent (2013) nitrate-nitrogen concentration data for the SSCG wells (Amec, 2015), Clean Harbors nitrate-nitrogen data from 2019, and nitrate-nitrogen data from the Valley Water wells (averages for 2014 – 2019 or 2018-2019). Similar datasets for (2013-2014) TDS, boron, chloride, and sulfate data are shown on Figures 2, 3, 4, and 5, respectively. The available data for the SSCG wells also evaluated to assess the potential beneficial uses of groundwater in the area (Amec, 2016).

### References


Area Energy LLC. 2005. *Supplemental Technical Information, Aera Energy LLC (Aera), South Belridge Oil Field, Kern County.* Letter from R.L. Chambers to Doug Wachtell, California Regional Water Quality Control Board, Fresno, CA. 21 July 2005.

Amec Foster Wheeler. 2015. *Groundwater Assessment Report, Westside Districts and Western Supplemental Area, Kern and Kings Counties, California.* 21 May 2015.

Amec Foster Wheeler. 2016. *Basin Plan Amendment Work Plan, Westside Water Quality Coalition.* 19 September 2016.

# ATTACHMENT 1:
## Starrh & Starrh Cotton Growers' Fields North of Clean Harbors


**2018**

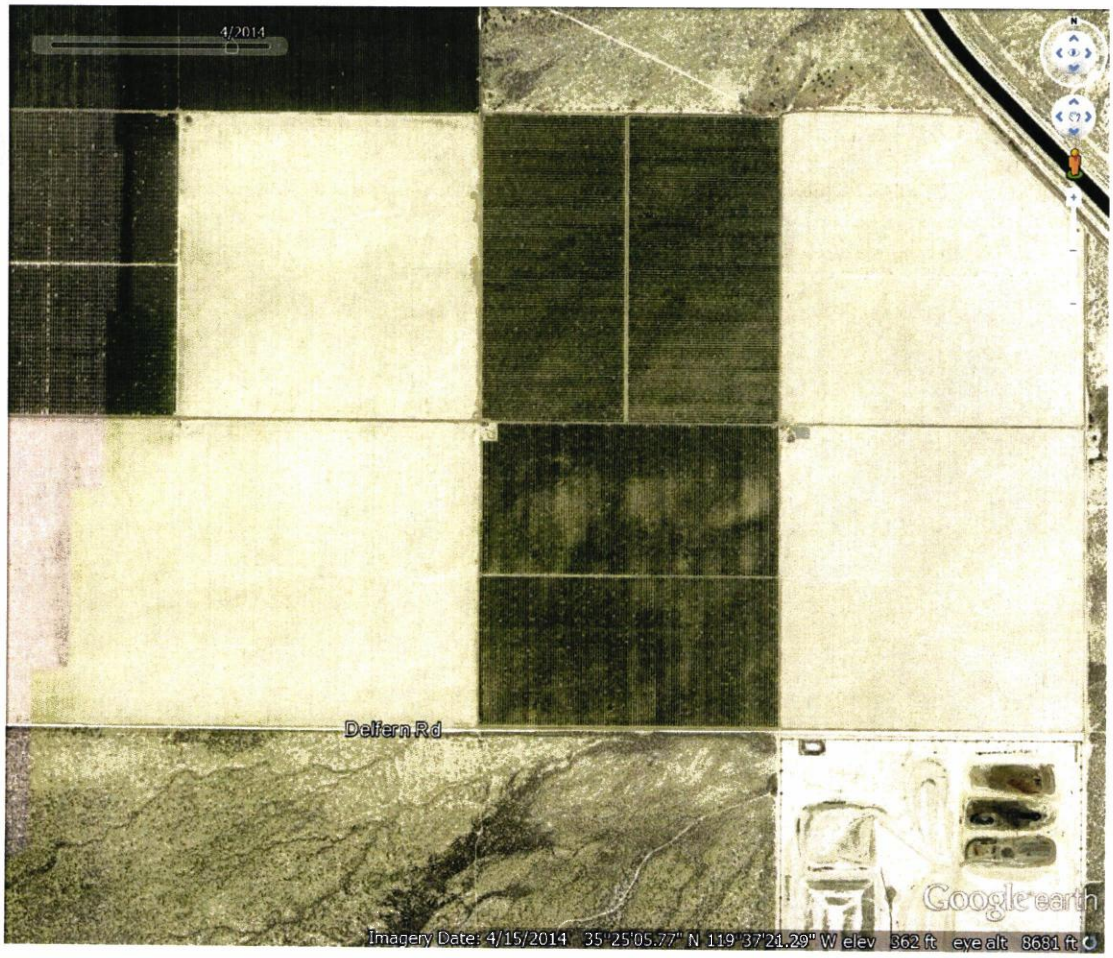

**2017**


10/2016
Delfern Rd
Google earth
Imagery Date: 10/1/2016 35°25'40.24" N 119°38'18.66" W elev 394 ft eye alt 8681 ft

**2016**


4/2015
Delfern Rd
Google earth
Imagery Date: 4/30/2015 35°25'04.25" N 119°38'16.53" W elev 406 ft eye alt 8681 ft

**2015**


4/2014
Delfern Rd
Google earth
Imagery Date: 4/15/2014 35°25'05.77" N 119°37'21.29" W elev 362 ft eye alt 8681 ft

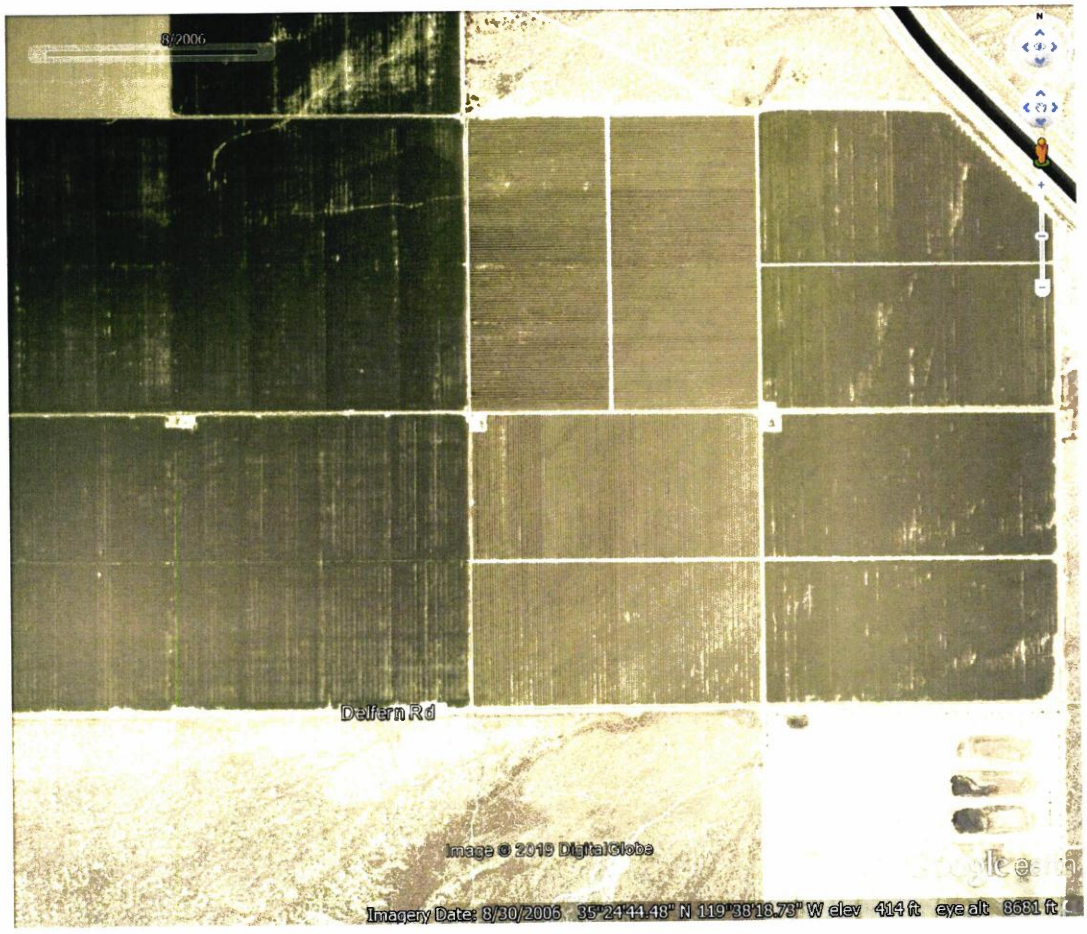
**2014**


8/2012
Delfern Rd
Image USDA Farm Service Agency
Google earth
Imagery Date: 8/7/2012 35°25'05.77" N 119°37'21.29" W elev 362 ft eye alt 8681 ft

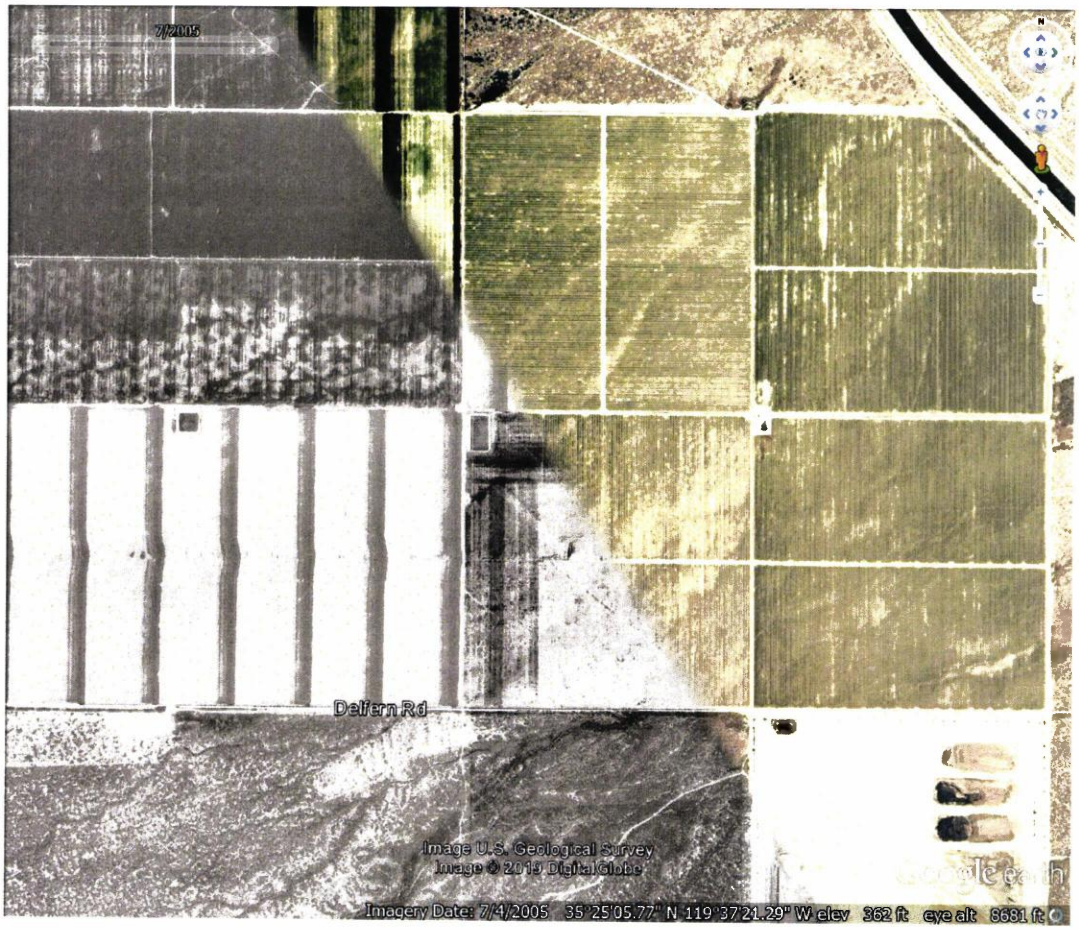
**2012**


4/2011
Delfern Rd
Image USDA Farm Service Agency
Imagery Date: 5/24/2009 35°25'18.40" N 119°38'18.18" W elev 407 ft eye alt 8681 ft

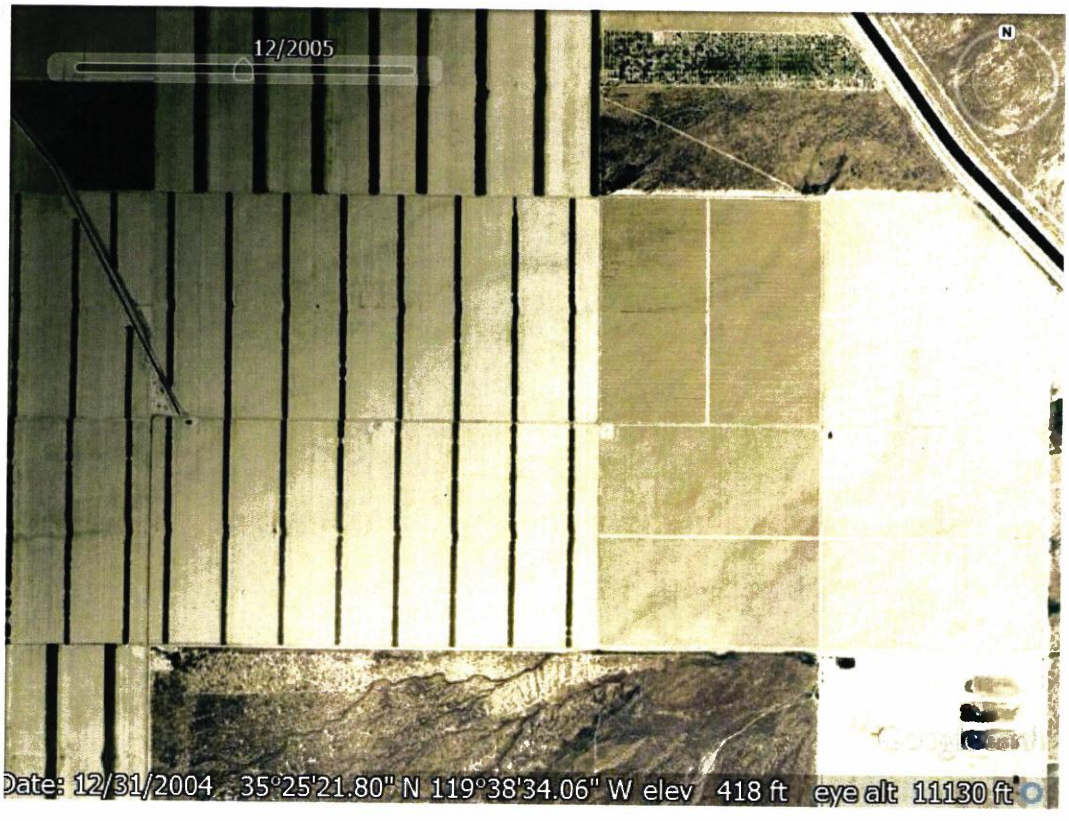
2009


8/2006
Delfern Rd
Image © 2015 DigitalGlobe
Imagery Date: 8/30/2006 35°24'44.48" N 119°38'18.73" W elev 414 ft eye alt 8681 ft

2006



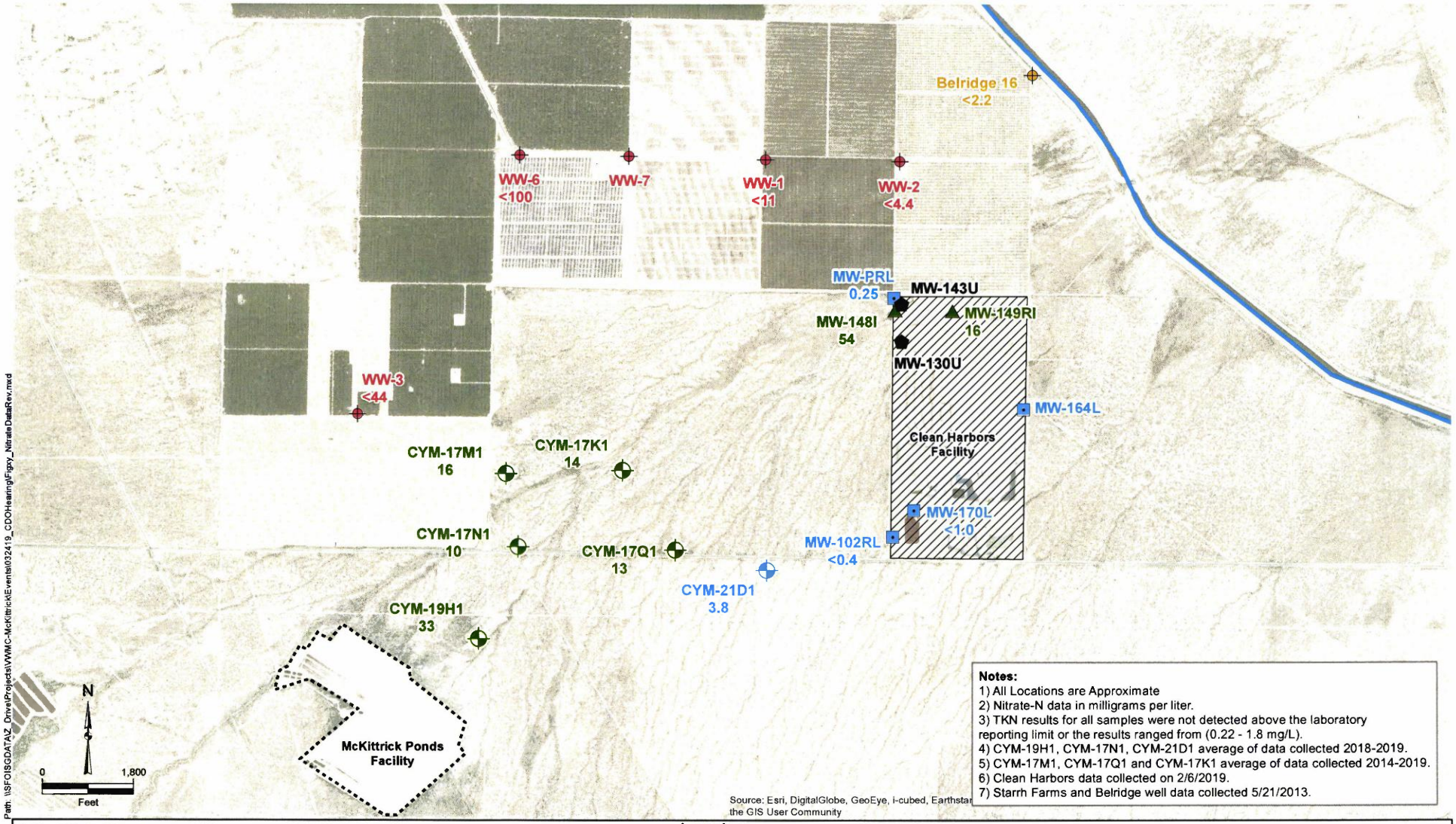

**2005 (right side)**




**2004**


5/1994
Delfern Rd
Image U.S. Geological Survey
Google earth
Imagery Date: 5/9/1994 35°25'05.77" N 119°37'21.29" W elev 362 ft eye alt 8681 ft

**1994**




**Notes:**
1) All Locations are Approximate
2) Nitrate-N data in milligrams per liter.
3) TKN results for all samples were not detected above the laboratory reporting limit or the results ranged from (0.22 - 1.8 mg/L).
4) CYM-19H1, CYM-17N1, CYM-21D1 average of data collected 2018-2019.
5) CYM-17M1, CYM-17Q1 and CYM-17K1 average of data collected 2014-2019.
6) Clean Harbors data collected on 2/6/2019.
7) Starrh Farms and Belridge well data collected 5/21/2013.

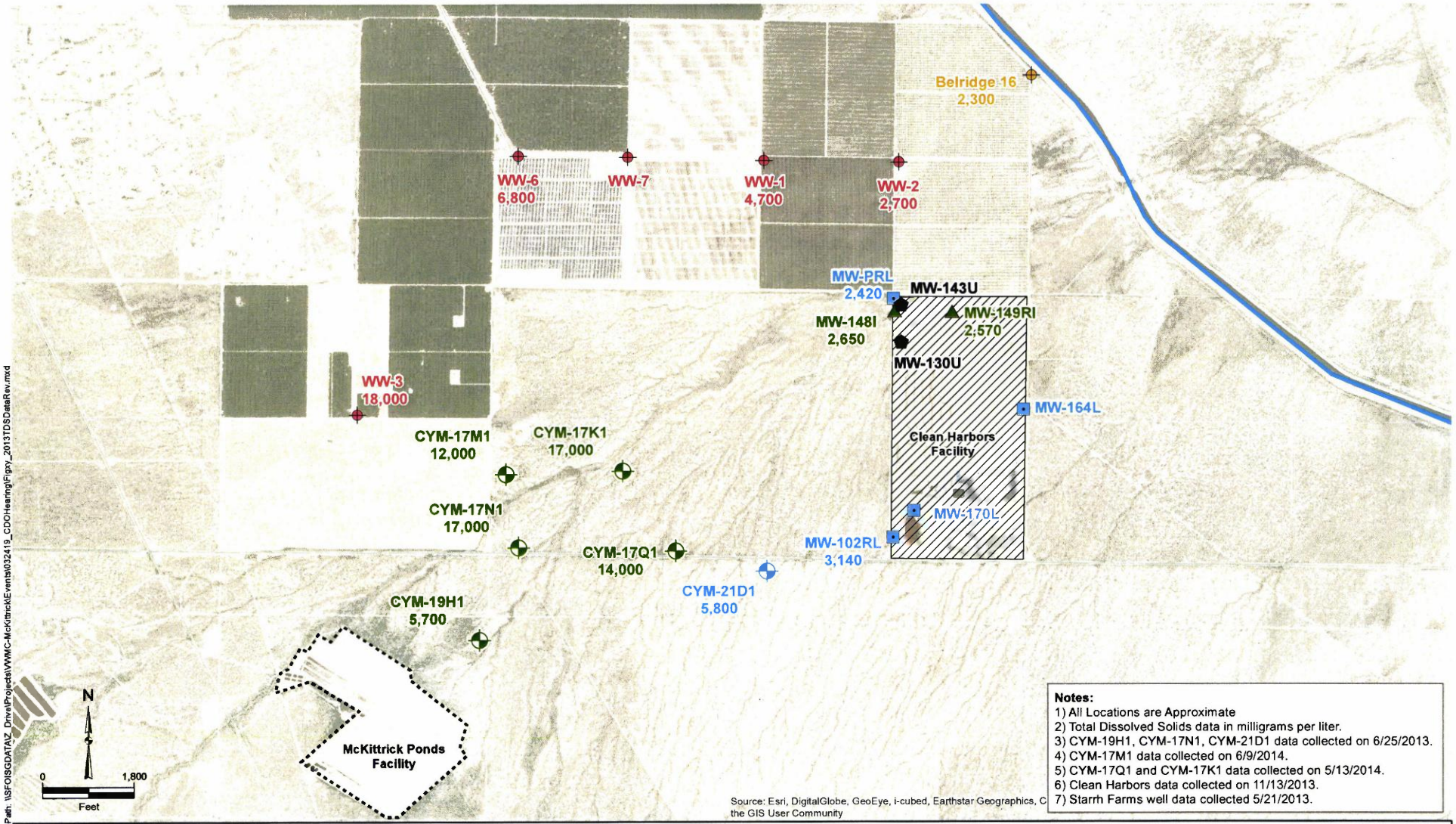
Path: \\SFOISGDATA\Z_Drive\Projects\VWMC-McKittrick\Events\032419_CDOHearing\Figxy_NitrateDataRev.mxd

**Valley Water Management Company - McKittrick Facility**
**Nitrate-N Concentrations**

**Figure 1**

**Legend:**

- Starrh Farms Well
- Other Nearby Well
- Valley Water Management Company Well (Upper Tulare Clay)
- Valley Water Management Company Well (Lower Tulare Sands)
- Clean Harbors Well (Alluvial Fan Upper Perched Zone)
- Clean Harbors Well (Upper Tulare Intermediate Perched Zone)
- Clean Harbors Well (Lower Tulare Water Table Zone)




Path: \\SFOISGDATA\Z_Drive\Projects\WWMC-McKittrickEvents\032419_CDOHearingFigpy_2013TDSDataRev.mxd

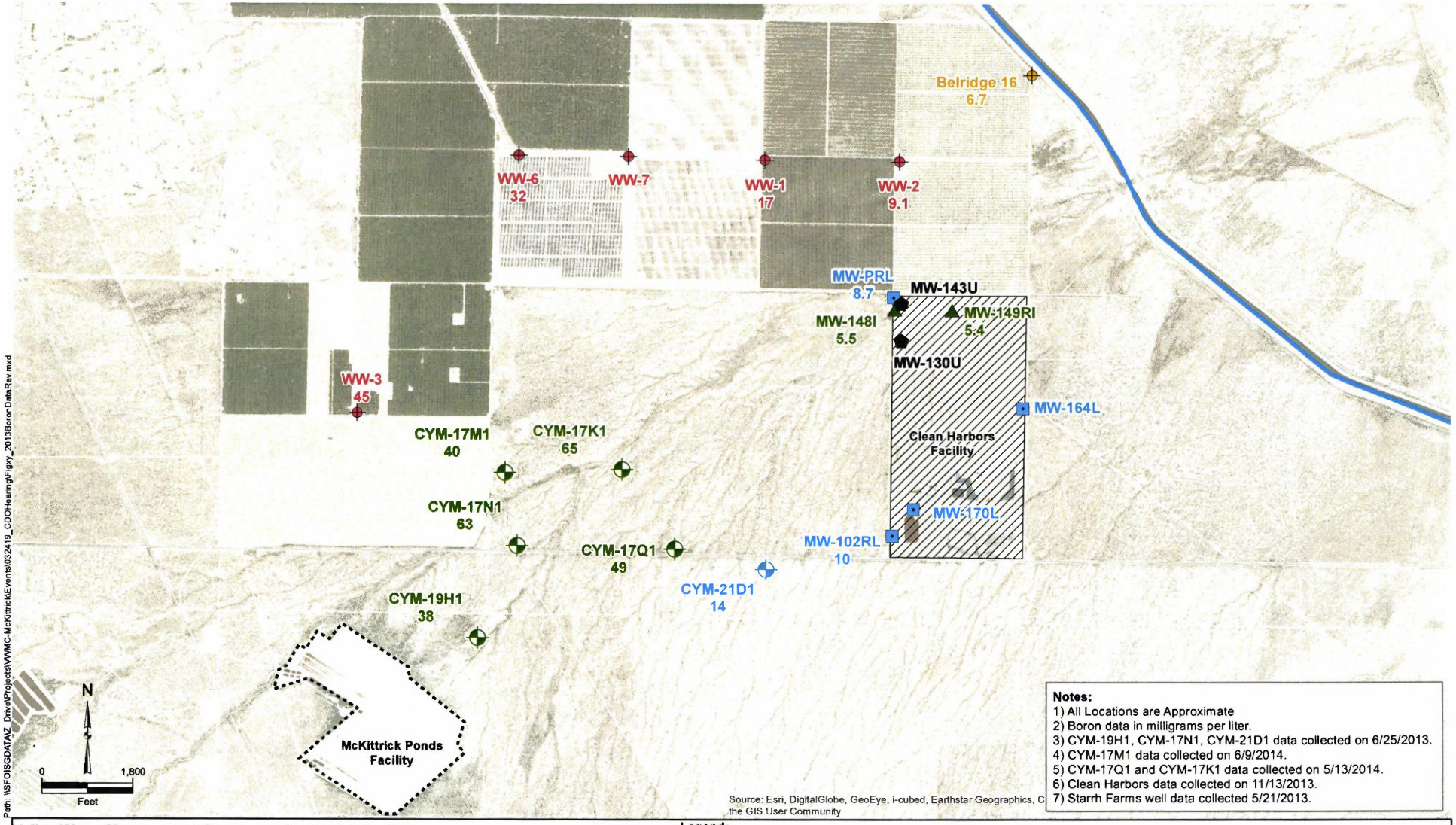
**Notes:**
1) All Locations are Approximate
2) Total Dissolved Solids data in milligrams per liter.
3) CYM-19H1, CYM-17N1, CYM-21D1 data collected on 6/25/2013.
4) CYM-17M1 data collected on 6/9/2014.
5) CYM-17Q1 and CYM-17K1 data collected on 5/13/2014.
6) Clean Harbors data collected on 11/13/2013.
7) Starrh Farms well data collected 5/21/2013.

**Valley Water Management Company - McKittrick Facility**
**2013/2014 Total Dissolved Solids Concentrations**

**Figure 2**

**Legend:**

- Starrh Farms Well
- Other Nearby Well
- Valley Water Management Company Well (Upper Tulare Clay)
- Valley Water Management Company Well (Lower Tulare Sands)
- Clean Harbors Well (Alluvial Fan Upper Perched Zone)
- Clean Harbors Well (Upper Tulare Intermediate Perched Zone)
- Clean Harbors Well (Lower Tulare Water Table Zone)




Path: \\SFOISGDATA\Z_Drive\Projects\VWMC-McKittrickEvents\032419_CDOHearing\Figxy_2013BoronDataRev.mxd

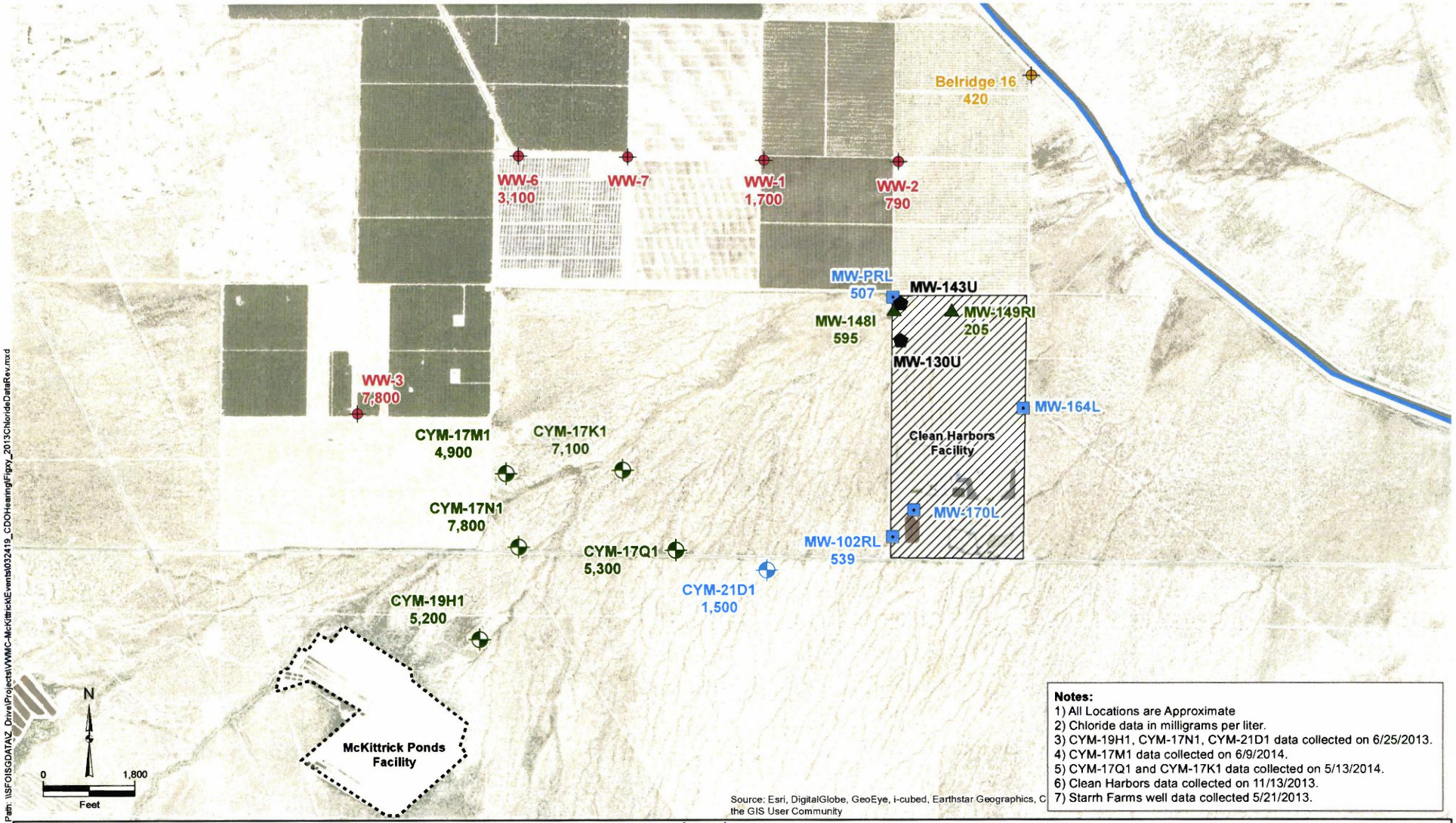
**Notes:**
1) All Locations are Approximate
2) Boron data in milligrams per liter.
3) CYM-19H1, CYM-17N1, CYM-21D1 data collected on 6/25/2013.
4) CYM-17M1 data collected on 6/9/2014.
5) CYM-17Q1 and CYM-17K1 data collected on 5/13/2014.
6) Clean Harbors data collected on 11/13/2013.
7) Starrh Farms well data collected 5/21/2013.

**Valley Water Management Company - McKittrick Facility**
**2013/2014 Boron Concentrations**

**Figure 3**

**Legend:**

- Starrh Farms Well
- Other Nearby Well
- Valley Water Management Company Well (Upper Tulare Clay)
- Valley Water Management Company Well (Lower Tulare Sands)
- Clean Harbors Well (Alluvial Fan Upper Perched Zone)
- Clean Harbors Well (Upper Tulare Intermediate Perched Zone)
- Clean Harbors Well (Lower Tulare Water Table Zone)




**Notes:**
1) All Locations are Approximate
2) Chloride data in milligrams per liter.
3) CYM-19H1, CYM-17N1, CYM-21D1 data collected on 6/25/2013.
4) CYM-17M1 data collected on 6/9/2014.
5) CYM-17Q1 and CYM-17K1 data collected on 5/13/2014.
6) Clean Harbors data collected on 11/13/2013.
7) Starrh Farms well data collected 5/21/2013.

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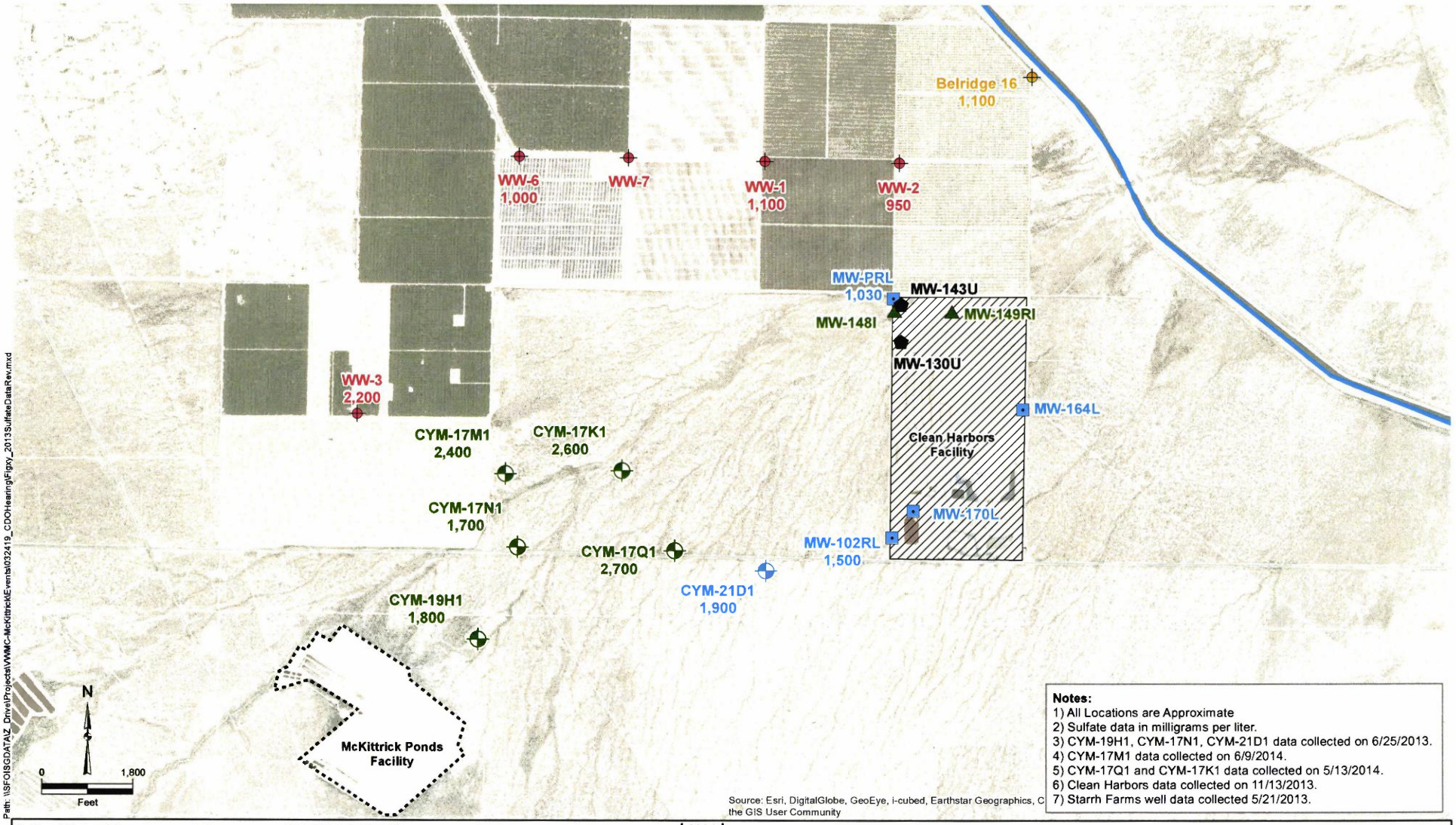
**Valley Water Management Company - McKittrick Facility**
**2013/2014 Chloride Concentrations**

**Figure 4**

**Legend:**
- Starrh Farms Well
- Other Nearby Well
- Valley Water Management Company Well (Upper Tulare Clay)
- Valley Water Management Company Well (Lower Tulare Sands)
- Clean Harbors Well (Alluvial Fan Upper Perched Zone)
- Clean Harbors Well (Upper Tulare Intermediate Perched Zone)
- Clean Harbors Well (Lower Tulare Water Table Zone)




**Notes:**
1) All Locations are Approximate
2) Sulfate data in milligrams per liter.
3) CYM-19H1, CYM-17N1, CYM-21D1 data collected on 6/25/2013.
4) CYM-17M1 data collected on 6/9/2014.
5) CYM-17Q1 and CYM-17K1 data collected on 5/13/2014.
6) Clean Harbors data collected on 11/13/2013.
7) Starrh Farms well data collected 5/21/2013.

**Legend:**
- Starrh Farms Well
- Other Nearby Well
- Valley Water Management Company Well (Upper Tulare Clay)
- Valley Water Management Company Well (Lower Tulare Sands)
- Clean Harbors Well (Alluvial Fan Upper Perched Zone)
- Clean Harbors Well (Upper Tulare Intermediate Perched Zone)
- Clean Harbors Well (Lower Tulare Water Table Zone)

**Valley Water Management Company - McKittrick Facility**
**2013/2014 Sulfate Concentrations**

**Figure 5**

Path: \\SFOISGDATA\Z_Drive\Projects\VWMC-McKittrick\Events\032419_CDOHearingFigs\y_2013SulfateDataRev.mxd

# ATTACHMENT 2:
## Northwest Corner of Clean Harbors

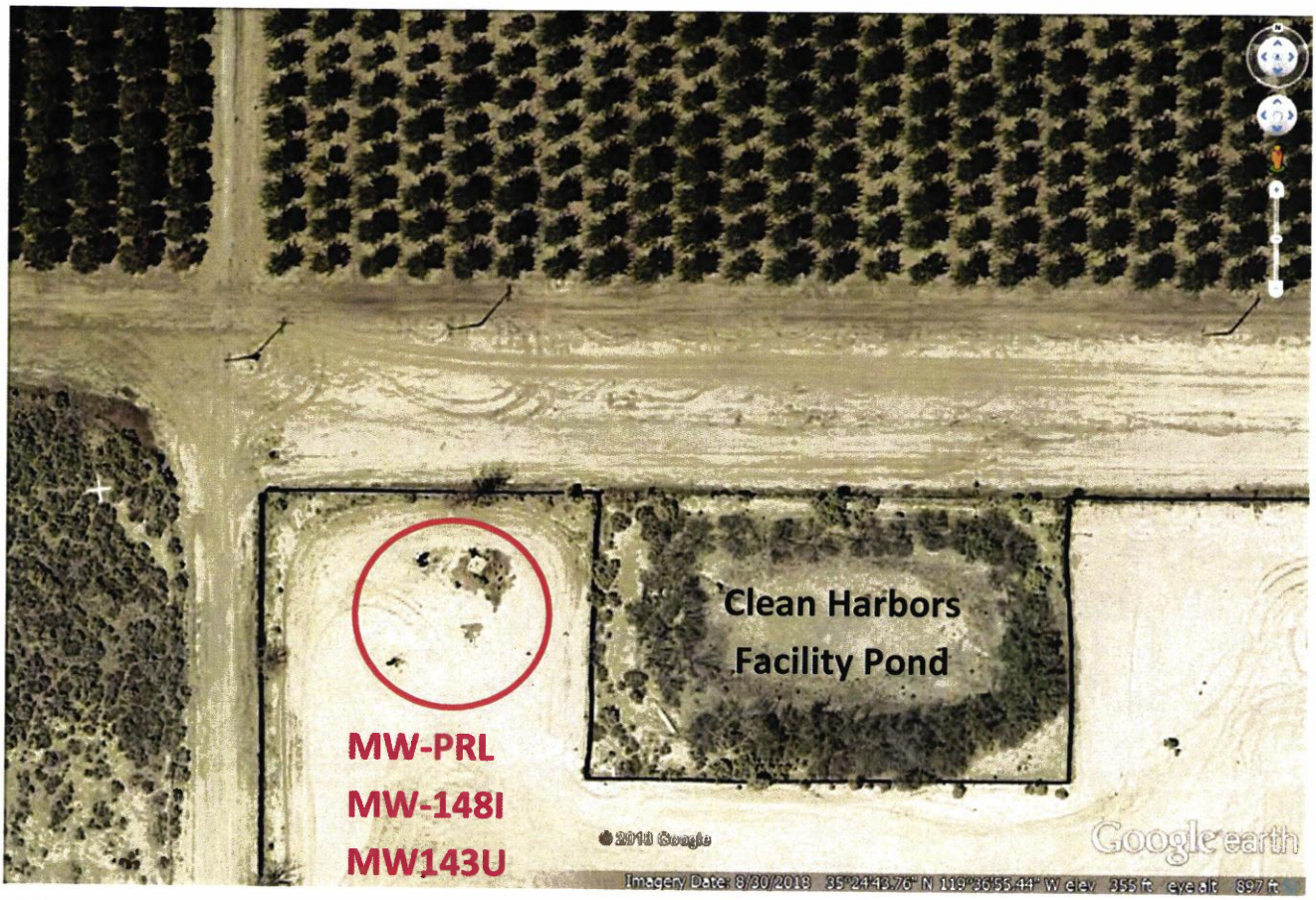



***Photo 1: 2018 Aerial***

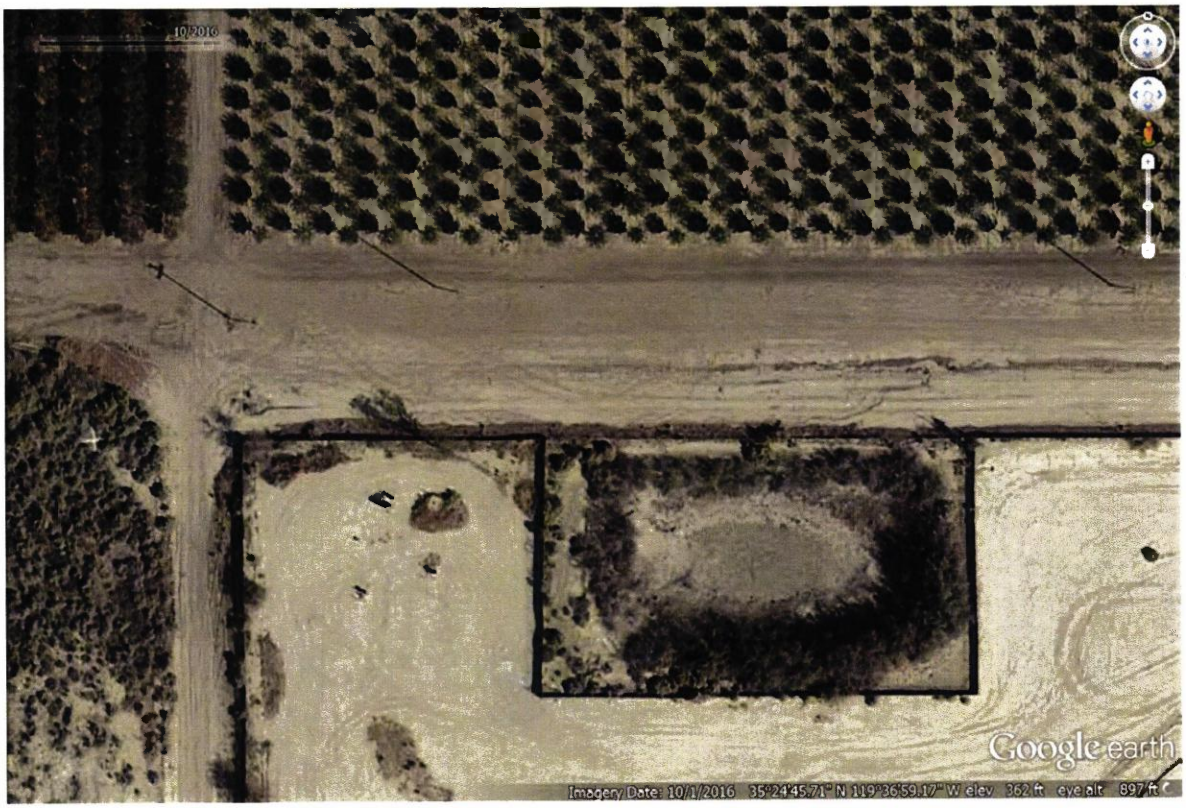



***Photo 2: 2016 Aerial***

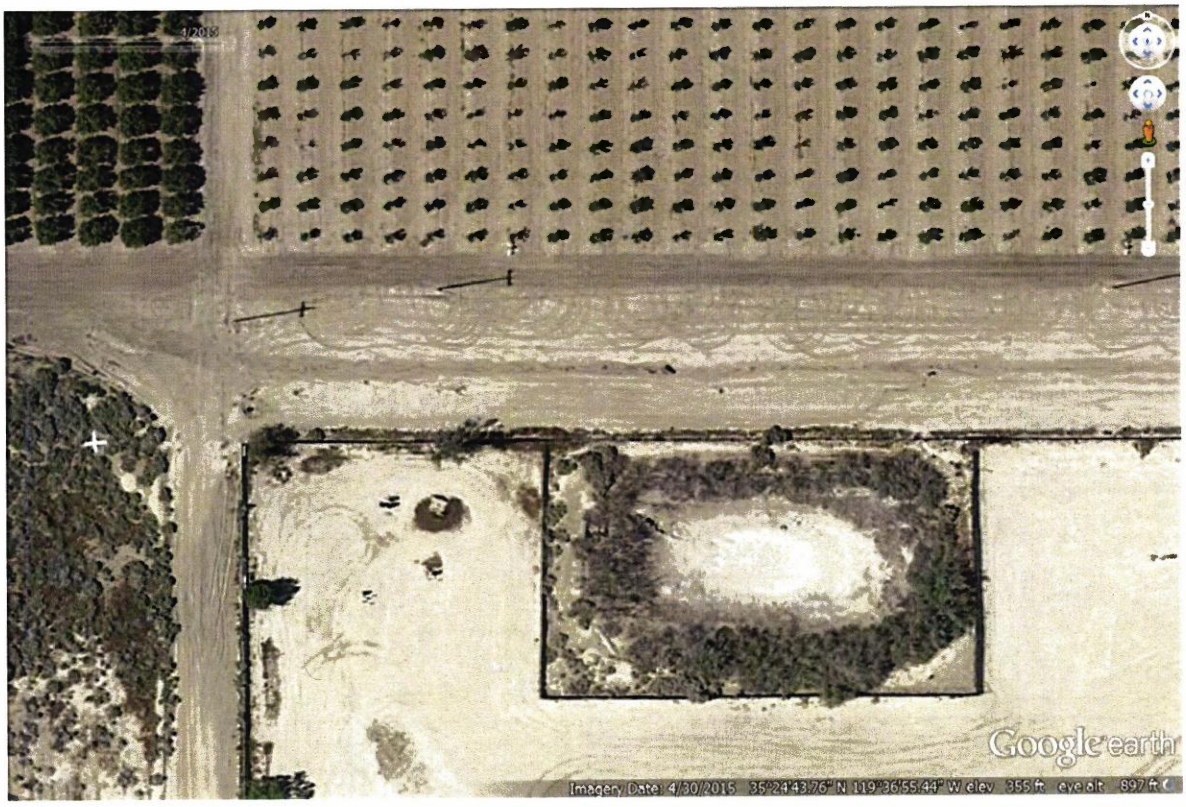



***Photo 3: 2015 Aerial***

*Attachment 2: Northwest Corner of Clean Harbors*

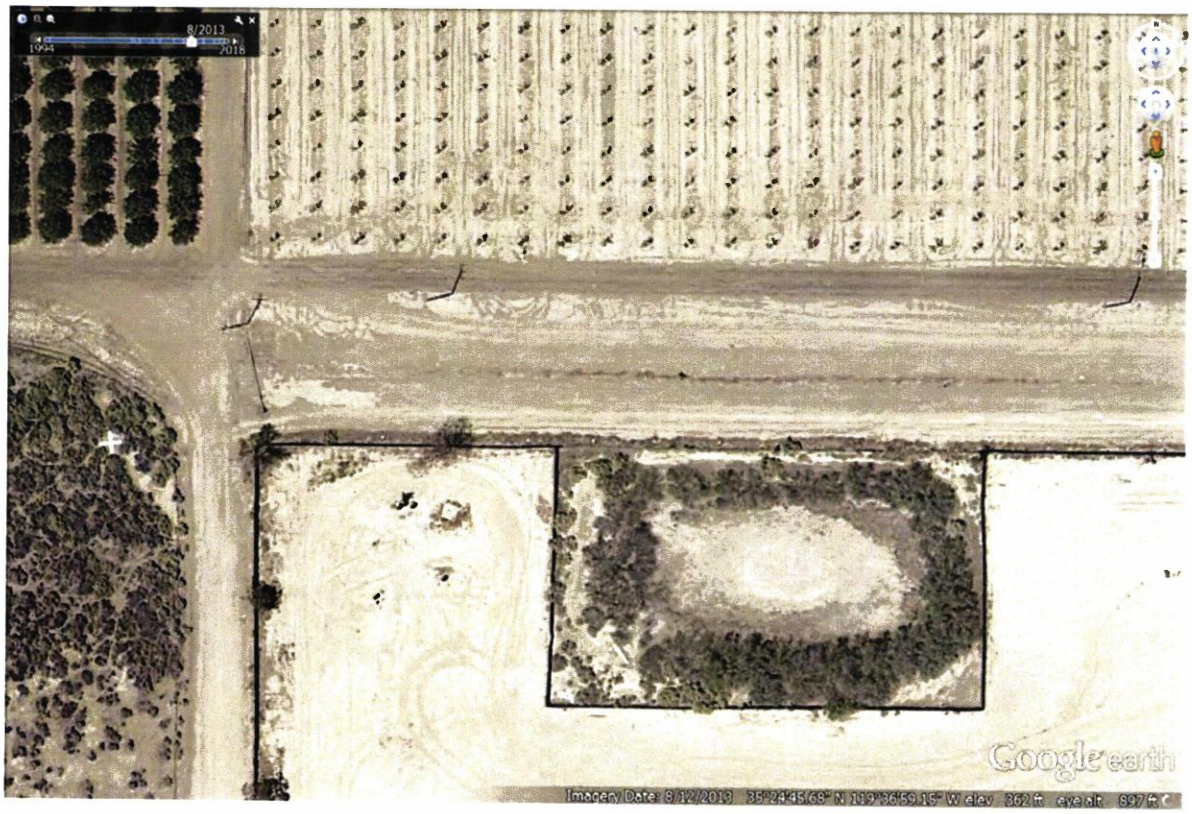



**Photo 4: 2013 Aerial**


**Photo 5: 2012 Aerial**

*Attachment 2: Northwest Corner of Clean Harbors*


**Photo 6: 2011 Aerial**

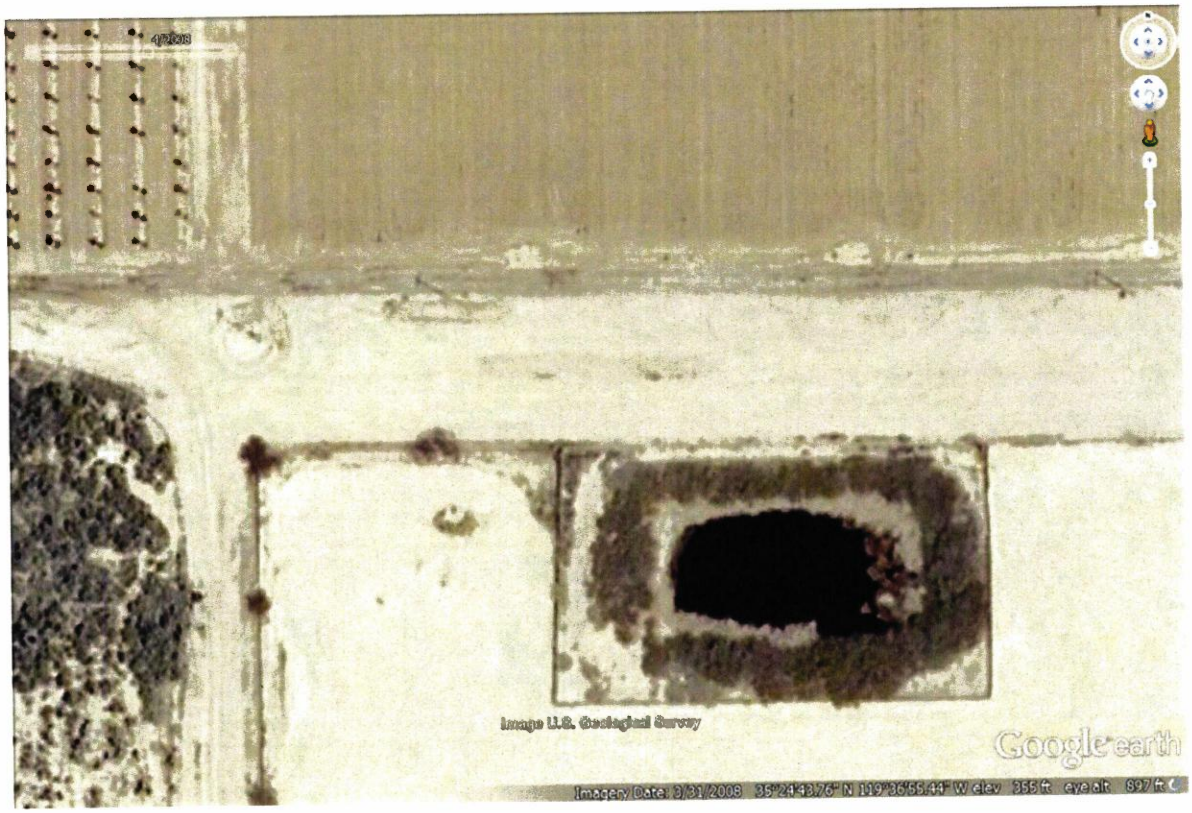



**Photo 7: 2008 Aerial**

*Attachment 2: Northwest Corner of Clean Harbors*

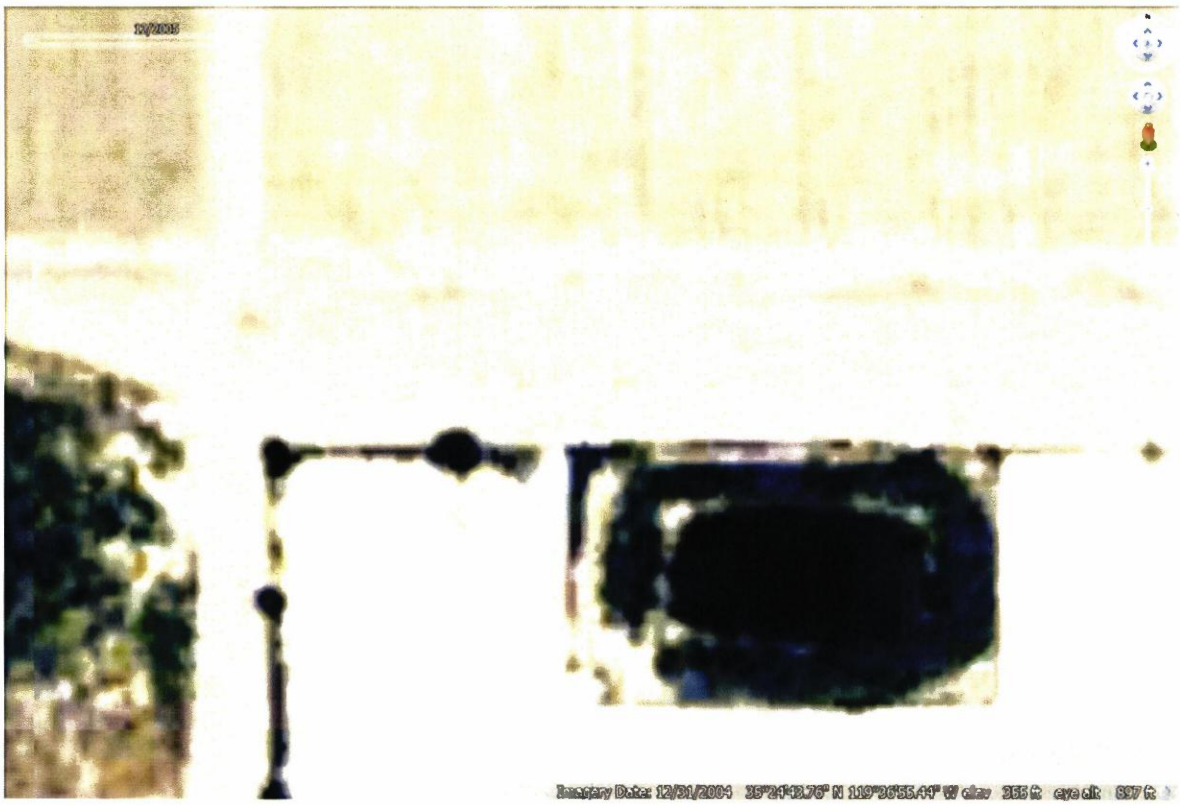


**Photo 8: 2004 Aerial**

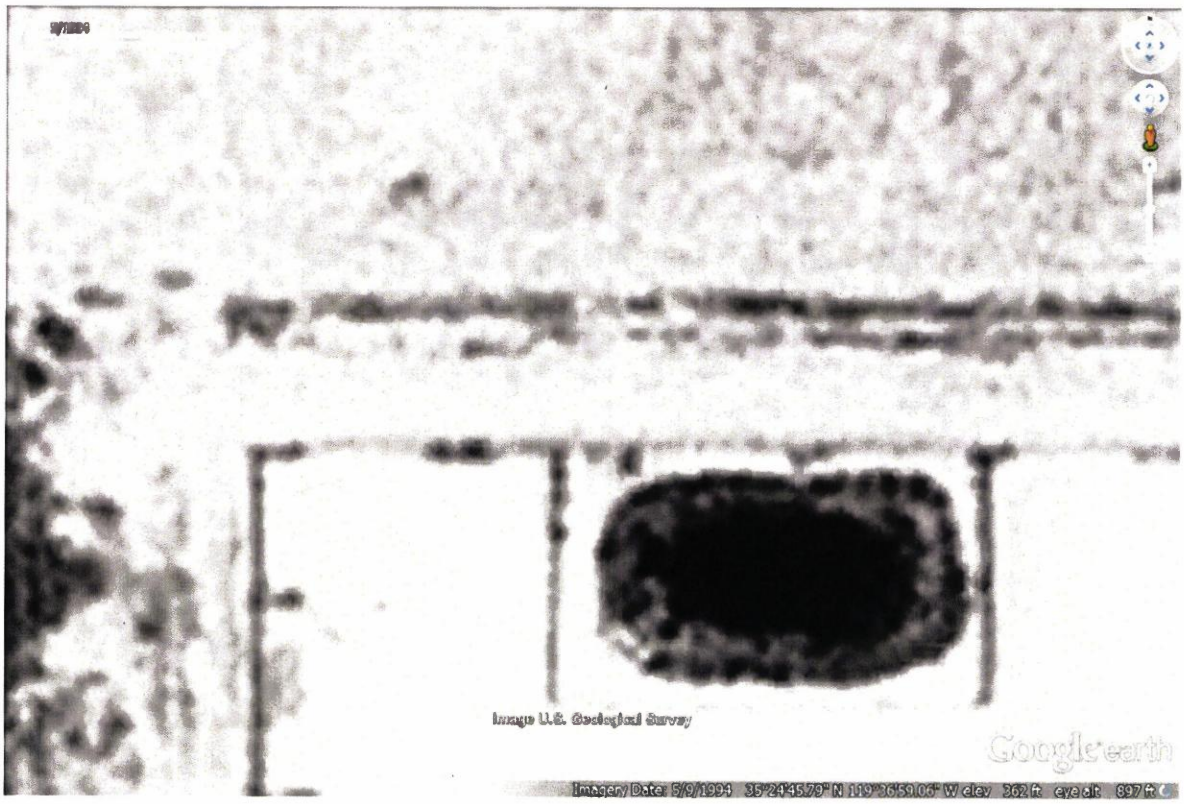



**Photo 9: 1994 Aerial**

*Attachment 2: Northwest Corner of Clean Harbors*